

Amendments to the Claims:

1. **(Original)** A high-voltage power supply that includes at least a high-voltage transformer and a driving circuit for driving the high-voltage transformer and supplies power to a load connected to a secondary side of the high-voltage transformer, further comprising:

a high-voltage switching circuit for switching polarity of a DC output voltage generated on the secondary side of the high-voltage transformer; and

a control circuit for controlling switching by the high-voltage switching circuit based on a load current that is caused to flow by application of the DC current output voltage.

2. **(Original)** A high-voltage power supply according to claim 1, wherein a plurality of pairs of the high-voltage switching circuit and the control circuit are connected in parallel on the secondary side of the high-voltage transformer.

3. **(Currently amended)** A high-voltage power supply according to claim 1 ~~or 2~~, wherein the DC output voltage generated on the secondary side of the high-voltage transformer is converted into an AC output voltage having a rectangular waveform by performing PWM control for the high-voltage switching circuit by the control circuit.

4. **(Currently amended)** A high-voltage power supply according to ~~any one of claims 1 to 3~~ claim 1, wherein the high-voltage switching circuit has a full-bridge structure using a wide band gap semiconductor device as a switching device.

5. **(Original)** A high-voltage power supply according to claim 4, wherein the wide band gap semiconductor device comprises SiC as a base material.

6. **(Currently amended)** A high-voltage power supply according to ~~any one of claims 1 to 5~~ claim 1, wherein the load is an image forming apparatus and wherein the high-voltage power supply is used in at least one of a charge process for charging a photoconductor of the image forming apparatus, a transfer process for moving a toner image formed on a surface of the photoconductor to recording paper, and a separation process for electrically neutralizing the recording paper sticking to the photoconductor.

7. **(New)** A high-voltage power supply according to claim 2, wherein the DC output voltage generated on the secondary side of the high-voltage transformer is converted into an AC output voltage having a rectangular waveform by performing PWM control for the high-voltage switching circuit by the control circuit.

8. **(New)** A high-voltage power supply according to claim 2, wherein the high-voltage switching circuit has a full-bridge structure using a wide band gap semiconductor device as a switching device.

9. **(New)** A high-voltage power supply according to claim 3, wherein the high-voltage switching circuit has a full-bridge structure using a wide band gap semiconductor device as a switching device.

10. **(New)** A high-voltage power supply according to claim 2, wherein the load is an image forming apparatus and wherein the high-voltage power supply is used in at least one of a charge process for charging a photoconductor of the image forming apparatus, a transfer process for moving a toner image formed on a surface of the photoconductor to recording paper, and a separation process for electrically neutralizing the recording paper sticking to the photoconductor.

11. **(New)** A high-voltage power supply according to claim 3, wherein the load is an image forming apparatus and wherein the high-voltage power supply is used in at least one of a charge process for charging a photoconductor of the image forming apparatus, a transfer process for moving a toner image formed on a surface of the photoconductor to recording paper, and a separation process for electrically neutralizing the recording paper sticking to the photoconductor.

12. **(New)** A high-voltage power supply according to claim 4, wherein the load is an image forming apparatus and wherein the high-voltage power supply is used in at least one of a charge process for charging a photoconductor of the image forming apparatus, a transfer process for moving a toner image formed on a surface of the photoconductor to recording paper, and a separation process for electrically neutralizing the recording paper sticking to the photoconductor.

13. **(New)** A high-voltage power supply according to claim 5, wherein the load is an image forming apparatus and wherein the high-voltage power supply is used in at least one of a charge process for charging a photoconductor of the image forming apparatus, a transfer process for moving a toner image formed on a surface of the photoconductor to recording paper, and a separation process for electrically neutralizing the recording paper sticking to the photoconductor.